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Remarks

Regarding the Notice of Informal Application, the Applicants contend that a new Declaration is not required, according to 37 CFR 1.63(d)(1)(i-iv). The Declaration filed with the present application was a copy of the Declaration filed with the non-provisional parent application, which was compliant with the 37 CFR 1.63, and thus a new Declaration is not required under the rules. The new ADS was not required and was submitted only to indicate that one of the named inventors was deceased. A new declaration signed by the legal representative of the deceased inventor is not required since the original declaration was signed by the deceased inventor in compliance with applicable rules at the time the non-provisional application was filed. Therefore the Applicants respectfully contend that the Notice of Informal Application is in error and should be withdrawn.

About the Amendments

The claims have been amended to include only the dispersed gelled acrylic polymer that is produced via the post reaction of polyisocyanate with the acrylic polymer. Support for these amendments can be found on page 7 line 28 to page 8 line 19 and in examples 1, 2, 3, 4 and 6.

The word "substantially" was deleted from claim 16 to remove the rejection under 35 USC 112, second paragraph, for being indefinite. Claims 19, 20 and 21 were cancelled and claims 18 and 22 were amended to address the rejection.

Claims 16-25 stand rejected under 35 USC 102(b) as being anticipated by Antonelli et al. (US 5,310,807), hereinafter, Antonelli.

Antonelli discloses a star polymer formed by polymerizing a macromonomer of weight average molecular weight of 4,000-20,000 containing isocyanate groups to form a star polymer with 10-50% crosslinked core with at least 3 arms. The core of the star polymer is formed of monomers having at least two ethylenically unsaturated double bonds which are crosslinked with each other and the core has at least 3 free radical polymerizable sites each of which are reacted with the macromonomer (abstract and column 2 lines 38-49).

As currently amended, Applicants' claims require a dispersed gelled acrylic polymer containing isocyanate groups wherein the isocyanate groups are added via the post reaction of an isocyanate functional group with isocyanate reactive functional groups, wherein the isocyanate reactive functional groups are present in the core, the arms or both.

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Antonelli makes a macromonomer via a cobalt-catalyzed reaction. The Applicants respectfully contend that the macromonomer is not identical to the Applicants claimed invention. As disclosed by Antonelli, isocyanate functional monomers are among the many choices of monomers to choose from for producing the macromonomers described therein. The isocyanate groups of are necessarily attached to the star polymer via the polymerization of an ethylenically unsaturated moiety containing an isocyanate group (cf: column 3 lines 3 to 13; column 2 lines 21 to 49; column 3 lines 54 to 57)). Antonelli does not teach or suggest producing a polymer via the post reaction method. Applicants respectfully request that rejection of the claims in view of Antonelli be withdrawn.

Claims 16 and 19-22 are rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as being obvious over Fisher (US 5,231,137), hereinafter, Fisher.

Fisher discloses a process in which methyl methacrylate and an unsaturated isocyanate is polymerized in the presence of polypropylene to form a graft copolymer. The currently amended claims require that the isocyanate functionality be added by post reacting a polyisocyanate with an isocyanate reactive functional group that is present on the linear stabilizer arms, the core or both. This is not the same process or the same polymer produced by the method of Fisher.

The current claim also requires that the polymer produced be a dispersed gelled acrylic polymer having a crosslinked core and stabilizing arms. In contrast, the process of Fisher produces a *linear* polymer having side chains derived from isopropenyl alpha, alpha-dimethyl benzyl isocyanate (emphasis added, see abstract). Fisher produces a polymer that is clearly different from applicants dispersed gelled acrylic polymer.

Fisher does not detail the molecular weight of his backbone polymer, only a repeat unit range for the grafted side chains. One of ordinary skill in the art would know that for a given molecular weight and similar compositional attributes, a linear polymer would have a higher viscosity and a larger overall size than applicants dispersed gelled polymer. Thus the grafted polymer of Fisher would not necessarily produce the same results of applicants dispersed gelled acrylic polymer if used in

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similar application. Therefore, applicants believe that the currently claimed invention is not obvious over the cited prior art.

Applicants believe that they have shown the product of Fisher and the currently claimed invention is not substantially identical. Also, Fisher does not mention any solvents to be used with his invention nor does he mention any solubility characteristics resulting from the composition of one part of the polymer to the other. Applicants do not believe that Fisher provides enough information to establish inherency of the solubility characteristics.

While applicants believe that they have clearly established the difference between Fisher and the currently claimed invention, applicants would like to point to MPEP 2112 IV which quotes *in Re Rijckaert*, 9 F.3d, 1531, 1534, USPQ2d 1955, 1957 (Fed. Cir. 1993) by stating, "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish inherency of that result or characteristic" and *In Re. Roberston*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir 1999) which states, "To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be recognized by persons of ordinary skill in the art. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient."

Claims 16 and 19-22 and 25 are rejected under 35 USC 102(b) as being anticipated by, or in the alternative, under 35 USC 103(a) as being obvious over Quiring (US 4,134,935), hereinafter, Quiring.

Quiring discloses a dental varnish that is a graft copolymer comprising a methyl methacrylate backbone (see column 1 lines 52-63) and grafted onto the backbone, via a group capable of reacting with isocyanate groups, a polyisocyanate.

Quiring specifically states that the polymer is substantially non-crosslinked and readily soluble with molecular weights ranging from about 600 to about 12,000, see column 4 line 30 to 34 (emphasis added). In contrast, applicants' claim requires that the core of the dispersed gelled acrylic polymer is crosslinked. Also, the molecular weight of applicants' linear stabilizer arms is in the range of from 500-20,000 while the core is in the range of from 50,000 to 500,000 (see page 3 lines 32 to 35). As Quiring requires a linear substantially non-crosslinked polymer of a *maximum* molecular weight of 12,000 (see column 4 line 33) and applicants' polymer is

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comprised of a crosslinked core and has a *minimum* molecular weight of 50,500 (a core of 50,000 molecular weight plus one stabilizer arm having a molecular weight of 500), applicants believe that the polymers have been shown to be different.

Since the molecular weight ranges and structure (linear as opposed to crosslinked) are significantly different in Quiring versus the current dispersed gelled acrylic polymer, the anticipation rejection cannot be maintained, particularly on the basis of inherency. As was mentioned above in the discussion of Fisher, since the two products are not identical, the inherency argument in MPEP 2112V cannot be applied.

Regarding the obviousness rejection, the two polymers would not produce the same results if used in similar application due to the stated differences between them. Therefore, applicants believe that the currently claimed invention is not obvious over the cited prior art. Applicants respectfully request that the rejection be withdrawn.

Claims 16, 19-22, and 25 stand rejected under 35 USC 102(b), or in the alternative under 35 USC 103(a) in view of Kapuscki (US Pat. NO. 5021177).

Applicants respectfully disagree. Among other differences, Kapuscki does not disclose a use of a gelled acrylic polymer having a core and/or stabilizer comprising isocyanate-reactive functional groups. The presently-claimed invention is the product of the reaction between the isocyanate-reactive groups of the gelled acrylic polymer and isocyanate compounds. The grafted polymer described by Kapuscki does not include isocyanate-reactive groups, and in fact includes unreacted isocyanate groups. Kapuscki, therefore, does not anticipate the claimed invention.

Claims 16-25 stand rejected under nonstatutory obviousness-type double patenting in view of U.S. Patent No. 7,071,264.

Applicants respectfully disagree with the double-patenting rejection. The Applicants claim a composition useful as a crosslinking agent, wherein the crosslinking agent is obtained from the reaction of a gelled acrylic polymer with an isocyanate compound. The claimed invention in '264 is a coating composition comprising both a crosslinkable and a crosslinking component, wherein the crosslinking component comprises a polyamine, a polyketimine, polyaldimine, polyepoxy, polyisocyanate, polyol, silane, melamine, polyaspartic ester, polyanhydride, polyacid, or a combination thereof. The '264 patent does not include a gelled acrylic polymer adduct as the crosslinking component. As such, the


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obviousness-double patenting rejection is inappropriate, and there is no need for a terminal disclaimer, in Applicants' view.

Applicants request reconsideration of the rejected claims, and request that the Examiner issue a Notice of Allowability instead.

Respectfully submitted,


Kevin S. Dobson
ATTORNEY FOR APPLICANTS
Registration No.: 40,296
Telephone: (302) 992-2236
Facsimile: (302) 892-5526

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